

SEQUENCE LISTING

<110> Berger, et al.

<120> NOVEL CHIMERIC PROTEIN FOR PREVENTION AND TREATMENT OF
HIV INFECTION

<130> 4239-60771

<140>

<141>

<150> PCT/US00/06946

<151> 2000-03-16

<150> 60/124,681

<151> 1999-03-16

<160> 11

<170> PatentIn Ver. 2.1

$\langle 210 \rangle$ 1

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: linker peptide

 $\langle 400 \rangle$ 1°

Gly Gly Gly Gly Ser

1 5

 $\langle 210 \rangle$ 2

<211> 35

<212> PRT

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> Description of Artificial Sequence: seven repeat polypeptide linker

<400> 2

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly

1	5	10	15
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Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
20 25 30

Gly Gly Ser
35

$\langle 210 \rangle$ 3

<211> 508

<212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: CD4-scFv(17b)

<400> 3

```

Met Asn Arg Gly Val Pro Phe Arg His Leu Leu Leu Val Leu Gln Leu
 1             5             10             15

Ala Leu Leu Pro Ala Ala Thr Gln Gly Lys Lys Val Val Leu Gly Lys
 20             25             30

Lys Gly Asp Thr Val Glu Leu Thr Cys Thr Ala Ser Gln Lys Lys Ser
 35             40             45

Ile Gln Phe His Trp Lys Asn Ser Asn Gln Ile Lys Ile Leu Gly Asn
 50             55             60

Gln Gly Ser Phe Leu Thr Lys Gly Pro Ser Lys Leu Asn Asp Arg Ala
 65             70             75             80

Asp Ser Arg Arg Ser Leu Trp Asp Gln Gly Asn Phe Pro Leu Ile Ile
 85             90             95

Lys Asn Leu Lys Ile Glu Asp Ser Asp Thr Tyr Ile Cys Glu Val Glu
100            105            110

Asp Gln Lys Glu Glu Val Gln Leu Leu Val Phe Gly Leu Thr Ala Asn
115            120            125

Ser Asp Thr His Leu Leu Gln Gly Gln Ser Leu Thr Leu Thr Leu Glu
130            135            140

Ser Pro Pro Gly Ser Ser Pro Ser Val Gln Cys Arg Ser Pro Arg Gly
145            150            155            160

Lys Asn Ile Gln Gly Gly Lys Thr Leu Ser Val Ser Gln Leu Glu Leu
165            170            175

Gln Asp Ser Gly Thr Trp Thr Cys Thr Val Leu Gln Asn Gln Lys Lys
180            185            190

Val Glu Phe Lys Ile Asp Ile Val Val Leu Ala Phe Gln Lys Ala Ser
195            200            205

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
210            215            220

Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
225            230            235            240

Gly Gly Ser Gln Val Gln Leu Leu Glu Ser Gly Ala Glu Val Lys Lys
245            250            255

Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Asp Thr Phe
260            265            270
  
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Ile Arg Tyr Ser Phe Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
275 280 285

Glu Trp Met Gly Arg Ile Ile Thr Ile Leu Asp Val Ala His Tyr Ala
290 295 300

Pro His Leu Gln Gly Arg Val Thr Ile Thr Ala Asp Lys Ser Thr Ser
305 310 315 320

Thr Val Tyr Leu Glu Leu Arg Asn Leu Arg Ser Asp Asp Thr Ala Val
325 330 335

Tyr Phe Cys Ala Gly Val Tyr Glu Gly Glu Ala Asp Glu Gly Glu Tyr
340 345 350

Asp Asn Asn Gly Phe Leu Lys His Trp Gly Gln Gly Thr Leu Val Thr
355 360 365

Val Thr Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly
370 375 380

Gly Ser Glu Leu Glu Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Ser
385 390 395 400

Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Glu Ser Val Ser
405 410 415

Ser Asp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu
420 425 430

Leu Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe
435 440 445

Ser Gly Ser Gly Ser Gly Ala Glu Phe Thr Leu Thr Ile Ser Ser Leu
450 455 460

Gln Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asn Asn Trp
465 470 475 480

Pro Pro Arg Tyr Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Leu
485 490 495

Val Pro Arg Gly Ser Gly His His His His His His
500 505

<210> 4

<211> 1440

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: CD4-scFv(17b)

<400> 4

atgaaccggg gagtcccttt taggcacttg cttctggtgc tgcaactggc gctcctccca 60

gcagccactc	agggaaagaa	agtggtgctg	ggcaaaaaag	gggatacagt	ggaactgacc	120
tgtacagctt	cccagaagaa	gagcatacaa	ttccactgga	aaaactccaa	ccagataaag	180
attctgggaa	atcagggctc	cttcttaact	aaagggtccat	ccaagctgaa	tgatcgcgct	240
gactcaagaa	gaagcctttg	ggaccaagga	aacttcccc	tgatcatcaa	gaatcttaag	300
atagaagact	cagatactta	catctgtgaa	gtggaggacc	agaaggagga	ggtgcaattg	360
ctagtgttcg	gattgactgc	caactctgac	accacctgc	ttcaggggca	gagcctgacc	420
ctgaccttgg	agagccccc	tggtagtagc	ccctcagtgc	aatgtaggag	tccaaggggt	480
aaaaacatac	agggggggaa	gaccctctcc	gtgtctcagc	tggagctcca	ggatagtggc	540
acctggacat	gcactgtctt	gcagaaccag	aagaagggtg	agttcaaaat	agacatcgtg	600
gtgctagctt	tccagaaggc	ctccggaggt	ggcggtagtg	ggggaggcgg	ttcaggcgga	660
ggtggatccg	gtggcgagg	gtcggcggg	ggtggaagcg	ggggtggcgg	ctccggaggc	720
ggaggttcac	aggtgcagct	gctcgagtct	ggggctgag	tgaagaagcc	tgggtcctcg	780
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cgacaggccc	ctggacaagg	ccttgagtgg	atgggaagga	tcatactat	ccttgatgta	900
gcacactacg	caccgcacct	ccagggcaga	gtcacgatta	ccgcggacaa	gtccacgagc	960
acagtctacc	tggagctgcg	gaatctaaga	tctgacgata	cggccgtata	tttctgtgcg	1020
ggagtgtacg	agggagaggc	ggacgagggg	gaatatgata	ataatgggtt	tctgaaacat	1080
tggggccagg	gaaccctgg	cacggtcacc	tcagggtggc	gtggctccgg	aggtggtggg	1140
agcgggtggc	gcggaatctga	actcgagttg	acgcagttct	cagccacctt	gtctgtgtct	1200
ccaggggaaa	gagccacctt	ctctctgacg	gccagtgaga	gtgttagtag	cgactatagc	1260
tggaccaggc	agaaacctgg	ccaggctccc	aggtctctca	tatatgtgtc	atccaccagg	1320
gccaccgggtg	tccagccag	gttcagtggc	agtggtctcg	gggcagaatt	cactctcacc	1380
atcagcagcc	tgcagtctga	agattttgca	gtttattact	gtcagcagta	caataactgg	1440

<210> 5

<211> 127

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic oligonucleotide

<400> 5

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cctccggagg  tggcggtagt  gggggaggcg  gttcaggcgg  aggtggatcc  ggaggcggag  60
ggtcgggcgg  ggggtggaagc  gggggtggcg  gctctggtgg  cggaggtagc  actagttaag  120
tgagtag                                           127
```

<210> 6

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: peptide
encoded by SEQ ID NO: 5

<400> 6

Ala Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
1 5 10 15

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser

20 25 30

Gly Gly Gly Gly Thr Thr Ser

<210> 7
 <211> 103
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: primer

<400> 7
 ttttatggat ccggtggcgg agggtcgggc ggggggtggaa gcgggggtgg cggctccgga 60
 ggcgagaggtt cacaggtgca gctgctcgag tctggggctg agg 103

<210> 8
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: peptide
 encoded for by SEQ ID NO: 7

<400> 8
 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 1 5 10 15
 Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Leu Glu Ser Gly Ala Glu
 20 25 30

<210> 9
 <211> 65
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: primer

<400> 9
 taatttatcg atcacgtgac tagtcctagg cccgggtcaa tgatgatgat gatgatggcc 60
 gctgc 65

<210> 10
 <211> 8
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: peptide
 encoded for by SEQ ID NO: 9

<400> 10
Ser Gly His His His His His His
1 5

<210> 11
<211> 131
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: reverse
oligonucleotide

<400> 11
ctagctactc acttaactag tggtagctcc gccacctgag ccgccacccc cgcttccacc 60
ccccgccga cctccgcct ccgatccac ctccgcctga accgcctccc cactaccgcc 120
acctccggag g 131

5'-GGG-3'